The Department of Mathematics

2021–22–A term

Course Name Dffierential Calculus for EE

Course Number 201.1.9671

Course web page
`https://www.math.bgu.ac.il//en/teaching/fall2022/courses/differential-calculus-f`

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Office Hours `https://www.math.bgu.ac.il/en/teaching/hours`

Abstract

Requirements and grading[1]

Course topics

.1 Real numbers. Supremum and Infimum of a set. .2 Convergent sequences, subsequences, Cauchy sequences. The Bolzano-Weierstrass theorem. Limit superior and limit inferior. .3 Series. Partial sums, convergent and divergent series, Cauchy criterion. Series of non-negative terms. The root and the ratio tests. Conditional and absolute convergence. The Leibnitz test for series with alternating signs. Rearrangements of series (without proof) .4 The limit of a function. Continuous functions. Continuity of the elementary functions. Properties of functions continuous on a closed interval: boundedness and attainment of extrema. Unfiorm continuity, Cantor?s theorem. .5 The derivative of a function. Mean value theorems. Derivatives of higher order. L'Hospital's rule. Taylor's theorem. Lagrange remainder formula.

[1]Information may change during the first two weeks of the term. Please consult the webpage for updates